Maryland Historical Trust

Maryland Inventory of Historic Properties number: B-4631

Name: WILKENS AVE. OVER GWYNNS FALLS

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST

Eligibility Recommended ___X___ Eligibility Not Recommended _____

Criteria: ____A ____B ___X_C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments: _____

_____

_____

Reviewer, OPS: Anne E. Bruder _____ Date: 3 April 2001

Reviewer, NR Program: Peter E. Kurtze _____ Date: 3 April 2001

MARYLAND HISTORICAL TRUST
NR-ELIGIBILITY REVIEW FORM

NR Eligible: yes X
no ___

Property Name: Wilkens Avenue Bridge (BC-5202) Inventory Number: B-4631

Address: Gywnns Falls City: Baltimore City Zip Code: 21223

County: Baltimore City USGS Topographic Map: Baltimore West, MD

Owner: Baltimore City

Tax Parcel Number: N/A Tax Map Number: N/A Tax Account ID Number: N/A

Project: Proposed Phase 2 Gywnns Falls Pathway Agency: Maryland State Highway Administration

Site visit by MHT Staff: X no ___ yes Name: _____ Date: _____

Eligibility recommended X Eligibility **not** recommended ____

Criteria: ___A ___B X C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G X None

Is the property located within a historic district? X no ____ yes Name of district: _____

Is district listed? ___no ___yes Determined eligible? ___no ____yes District Inventory Number: _____

Documentation on the property/district is presented in: P.A.C. Spero & Company and Louis Berger & Associates *Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report.* Maryland State Highway Administration, Maryland State Department of Transportation, Baltimore, Maryland, 1995.

Description of Property and Eligibility Determination: *(Use continuation sheet if necessary and attach map and photo)*

The Wilkens Avenue Bridge is located in the southwestern section of Baltimore where Wilkens Avenue crosses Gwynns Falls. It is bordered by Dukeland Street to the west, Wilmarco Avenue to the south, Brunswick Street to the east and Frederick Avenue to the north. The arched, reinforced concrete, single-span bridge was constructed in 1936. The bridge is faced with locally quarried natural stone and contains an arched ornamental niche in each side of the battered abutments. The parapet walls form the guardrails and are flush with the outside face of the bridge. The bridge is 126 feet long with an asphalt paved roadway width of 54 feet and a pair of concrete sidewalks that are 6 feet wide. It foundations are concrete spread footings.

The Wilkens Avenue Bridge is one of twenty-two bridges crossing Gwynns Falls in Baltimore. It was named after William Wilkens, founder of a "hair factory" that made hairpieces for the ornate coifs of Victorian women. On 22 October 1936, the Baltimore Sun newspaper reported, "By widening Wilkens Avenue in the bridge section, officials count on diverting cross-town traffic to the Washington Boulevard by this route rather that through more congested downtown arteries." The bridge replaced an earlier steel bridge and the Wilkens bridge construction, costing $175,000 was funded by the State Roads Commission.

The simple, modern bridge design, incorporating stone facing, was viewed at the time of its construction as an improvement over the plain, classical style concrete bridges of the era. The Wilkens Bridge was one of the first Baltimore bridges to be faced

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended X **Eligibility not recommended** _____

Criteria: ___A ___B X C ___D **Considerations:** ___A ___B ___C ___D ___E ___F ___G ___None

Comments:

Andrew Lewis — 05/03/01
Reviewer, Office of Preservation Services **Date**

B Cunningham — 5/10/01
Reviewer, NR program **Date**

with local stone. The 22 October 1936 edition of the Baltimore Sun reported "Something beautiful in the way of bridges was attempted by city engineers in the new Wilkens avenue (sic) span . . . Faced with natural stone and containing ornamental niches in the abutments, the new structure is a departure form the city's custom of building bare, undecorated structures."

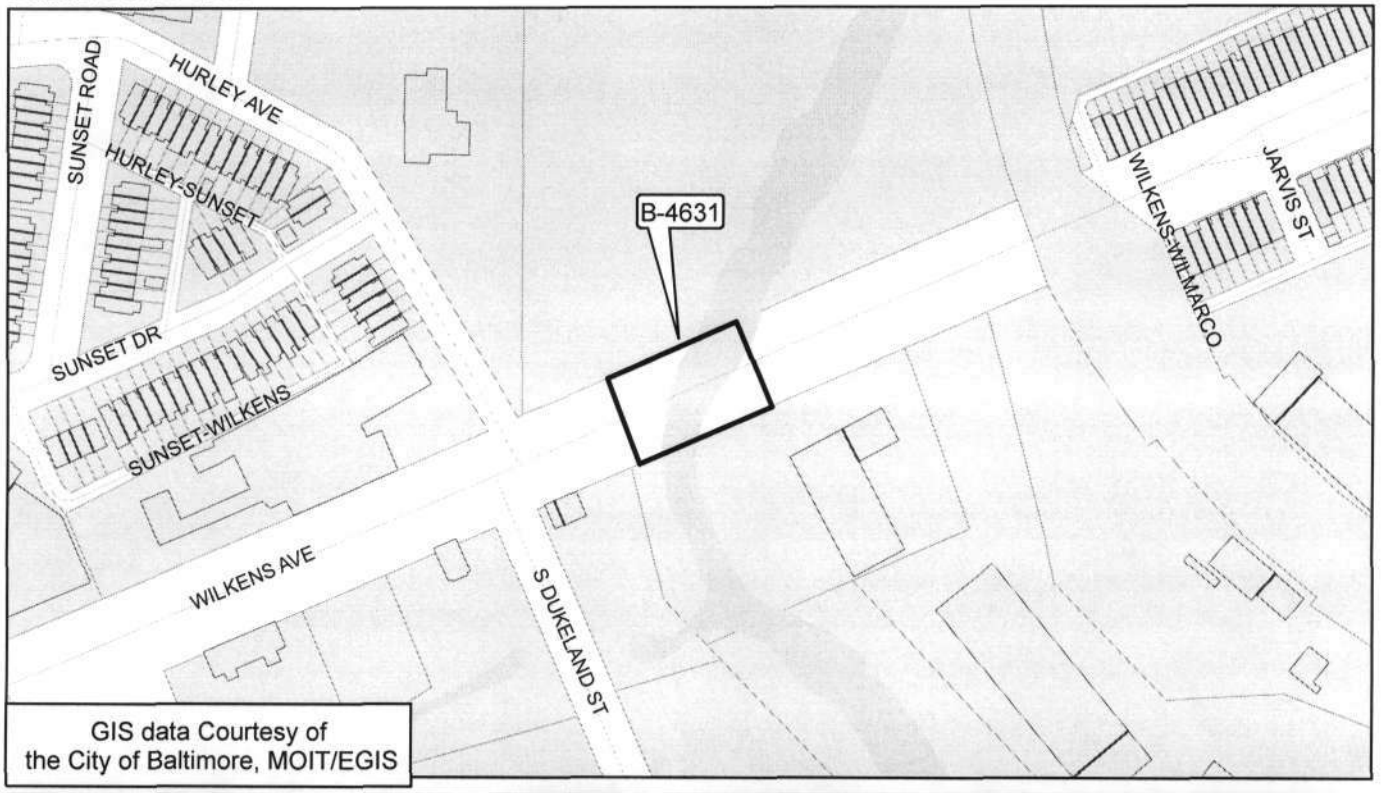
The Wilkens Avenue Bridge is not eligible for listing in the National Register of Historic Places under Criterion A because it is not associated with a broad pattern of history.

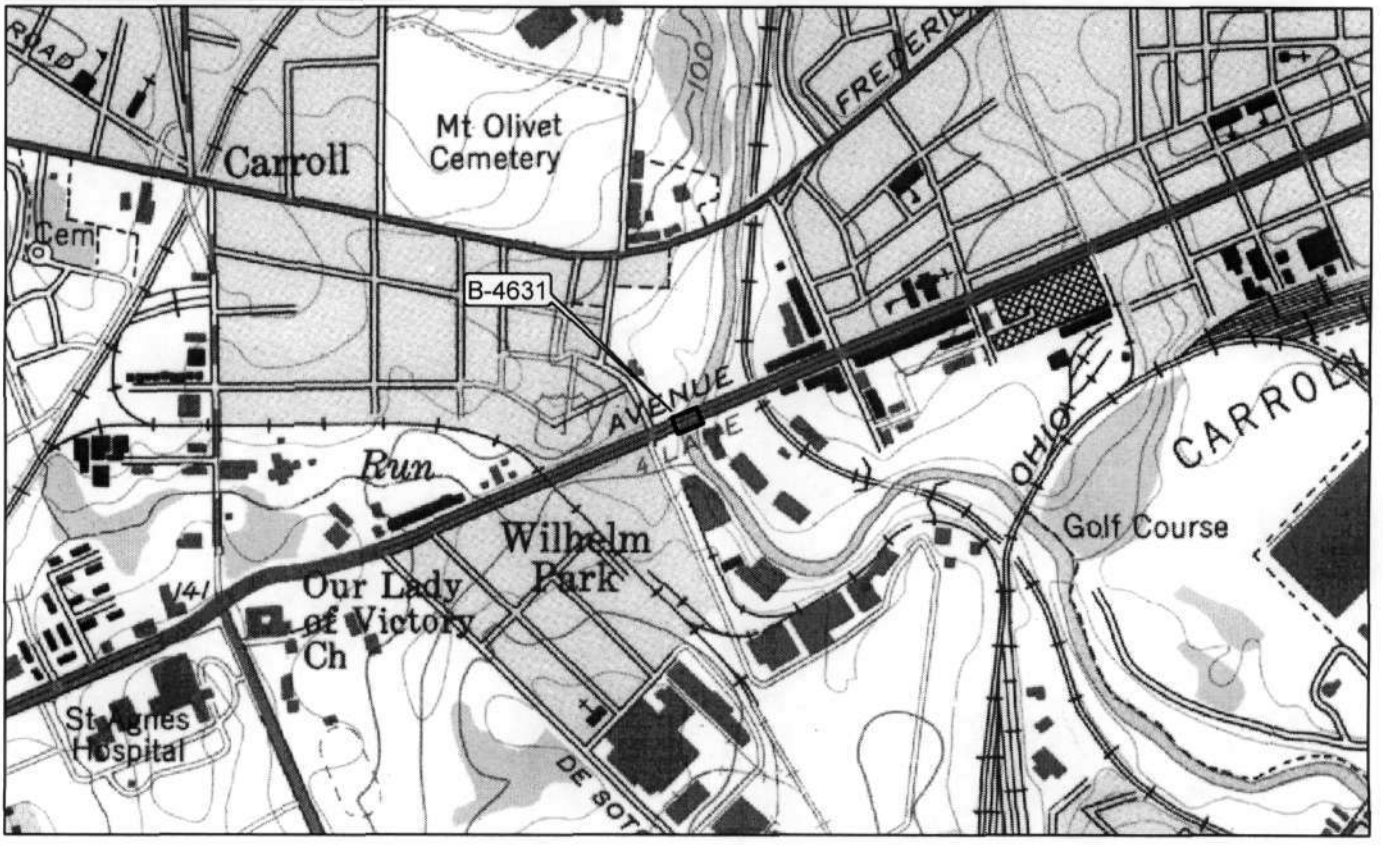
The Wilkens Avenue Bridge is not eligible for listing in the National Register of Historic Places under Criterion B because it is not associated with the productive years of a person of local, state, or national importance.

The Wilkens Avenue Bridge is an excellent example of an arched, reinforced concrete bridge type, embodying the distinctive characteristics of bridges of the 1930's era, and is eligible for the National Register under Criterion C.

The Wilkens Avenue Bridge environs are unlikely to yield new information in terms of archaeological study of the area and therefore, are not eligible for listing in the National Register of Historic Places under Criterion D.

B-4631
Wilkens Avenue Bridge (BC5202)
Wilkens Avenue over Gwynns Falls
Block 2107A vicinity
Baltimore City
Baltimore West Quad.





MHIP #4[illegible]

WILKENS AVENUE BRIDGE

BALT[illegible], MD

WARD BUCHER

JUNE 1999

LOCATED WHERE WILKENS AV CROSSES GWYNNS FALLS

B-4[illegible]

#1 OF [illegible]

MARYLAND INVENTORY OF HISTORIC BRIDGES **MHT No.** B-4631
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

SHA Bridge No. BC 5202 **Bridge name** Wilkens Avenue over Gwynns Falls

LOCATION:
Street/Road name and number [facility carried] Wilkens Avenue

City/town Baltimore **Vicinity** _____

County Baltimore

This bridge projects over: Road_____ **Railway**___ **Water** X **Land** _____

Ownership: State _____ **County** _____ **Municipal** X **Other** _____

HISTORIC STATUS:
Is the bridge located within a designated historic district? Yes _____ **No** X
National Register-listed district _____ **National Register-determined-eligible district** _____
Locally-designated district _____ **Other** _____

Name of district _____

BRIDGE TYPE:
Timber Bridge _____:
Beam Bridge _____ **Truss -Covered** ____ **Trestle** _____ **Timber-And-Concrete** ____

Stone Arch Bridge _____

Metal Truss Bridge _____

Movable Bridge _____:
Swing _____ **Bascule Single Leaf** ___ **Bascule Multiple Leaf** ___
Vertical Lift _____ **Retractile**_____ **Pontoon** _____

Metal Girder_____:
Rolled Girder _ **Rolled Girder Concrete Encased** _____
Plate Girder _____ **Plate Girder Concrete Encased** _____

Metal Suspension _____

Metal Arch _____

Metal Cantilever _____

Concrete X:
Concrete Arch X **Concrete Slab**_____ **Concrete Beam** _____ **Rigid Frame** _____
Other _____ **Type Name** _____

B-4631

DESCRIPTION:

Setting: Urban ____X____ **Small town** _____ **Rural** _____

Describe Setting:

Bridge BC 5202 carries Wilkens Avenue over Gwynns Falls in Baltimore City. Wilkens Avenue runs east-west and Gwynns Falls flows north to south. The bridge is located in a commercial/industrial area in southeast Baltimore City.

Describe Superstructure and Substructure:

Bridge BC 5202 is a 1-span, 4-lane, filled spandrel concrete arch bridge. The bridge, built in 1936, is 38.4 meters (126 feet) long and has a clear roadway width of 16.5 meters (54 feet); there are two sidewalks each measuring 1.8 meters (6 feet) wide. The out-to-out width is 21 meters (69.2 feet). The superstructure consists of one arch which spans 35 meters (115 feet) and supports a concrete deck and solid concrete parapets. The arch spandrel and parapets are covered with a stone veneer. The stone-veneer parapets are topped with concrete coping. The substructure consists of concrete abutments and stone wingwalls. The bridge has a sufficiency rating of 75.3.

According to the 1995 inspection report, this structure was in satisfactory condition. The bituminous roadway pavement has been repaired to patch cracks and small potholes. The riding surface and sidewalks are in generally good condition. The underside of the arch and the bridge fascias have cracks and efflorescence. There are several stones missing from the base of the north wingwall buttress. The stone masonry wingwall joints and several stones are cracked.

Discuss Major Alterations:

According to the 1995 Bridge Inspection Report, the roadway surface has been patched with asphalt to fill cracks and potholes. There is no record of additional alterations to Bridge BC 5202.

HISTORY:

WHEN was the bridge built: 1936
This date is: Actual ____X____ **Estimated** _____
Source of date: Plaque ____ **Design plans** ____ **City/County bridge files/inspection form** __X__ **Other (specify):** _____

WHY was the bridge built?

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

WHO was the designer?

Unknown

WHO was the builder?

Unknown

WHY was the bridge altered?

The bridge was altered to correct functional or structural deficiencies.

Was this bridge built as part of an organized bridge-building campaign?

Unknown

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:

A - Events _____ B- Person _____
C- Engineering/architectural character _____X_____

The bridge is eligible for the National Register of Historic Places under Criterion C, as a significant example of concrete arch construction. The structure has a high degree of integrity and retains such character-defining elements of the type as stone-faced spandrel walls and parapets, stone wingwalls, concrete abutments, and barrel.

Was the bridge constructed in response to significant events in Maryland or local history?

The advent of modern concrete technology fostered a renaissance of arch bridge construction in the United States. Reinforced concrete allowed the arch bridge to be constructed with much more ease than ever before and maintained the load-bearing capabilities of the form. As the structural advantages of reinforced concrete became apparent, the heavy, filled barrel of the arch was lightened into ribs. Spandrel walls were opened, to give a lighter appearance and to decrease dead load. This enabled the concrete arch to become flatter and multi-centered, with longer spans possible. Designers were no longer limited to the semicircular or segmental arch form of the stone arch bridge. The versatility of reinforced concrete permitted development of a variety of economical bridges for use on roads crossing small streams and rivers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic , with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of $3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural

post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's.

As the nation's automotive traffic increased in the early twentieth century, local road networks were consolidated, and state highway departments were formed to supervise the construction and improvement of state roads. With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction through the standardization of bridge designs.

The concept and practice of standardization was one of the most important developments in engineering of the twentieth century. In Maryland, as in the rest of the nation, the standardized concrete types became the predominant bridge types built. In the period 1911 to 1920 (the decade in which standardized plans were introduced), beams and slabs constituted 65 percent and arches 35 percent of the extant 29 bridges built in Maryland during this period. In the following decade, 1921-1930, the beam (now the T-beam) and slab increased to 73 percent and the arch had declined to 27 percent of the 129 extant bridges; in the next decade (1931-1940), the beam and slab achieved 82 percent and arches had further declined, constituting only 18 percent of the total of extant bridges built on state-owned roads between 1931 and 1946.

Although beam and slab bridges became the utilitarian choice, it appears that the arch was selected when aesthetic as well as other site conditions were considered. The architectural treatment of extant arch bridges supports this assessment. Many of these bridges were multiple span structures with open spandrels or masonry facing. Another decorative feature of the concrete arch bridge was an open, balustrade-style parapet. Despite the popularity of ornamental arches and the increase in use of beam and slab bridges, examples of simpler, single and multiple span closed concrete arch bridges with solid parapets continued to be constructed throughout the early twentieth century.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

The bridge is located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

The bridge is a potentially significant example of a concrete arch bridge, possessing a high degree of integrity.

Does the bridge retain integrity of important elements described in Context Addendum?

The bridge retains the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including stone-faced spandrel walls and parapets, stone wingwalls, concrete abutments and barrel.

B-4631

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

This bridge is not a significant example of the work of a manufacturer, designer, and/or engineer.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

City/County inspection/bridge files X **SHA inspection/bridge files** _____
Other (list): _____

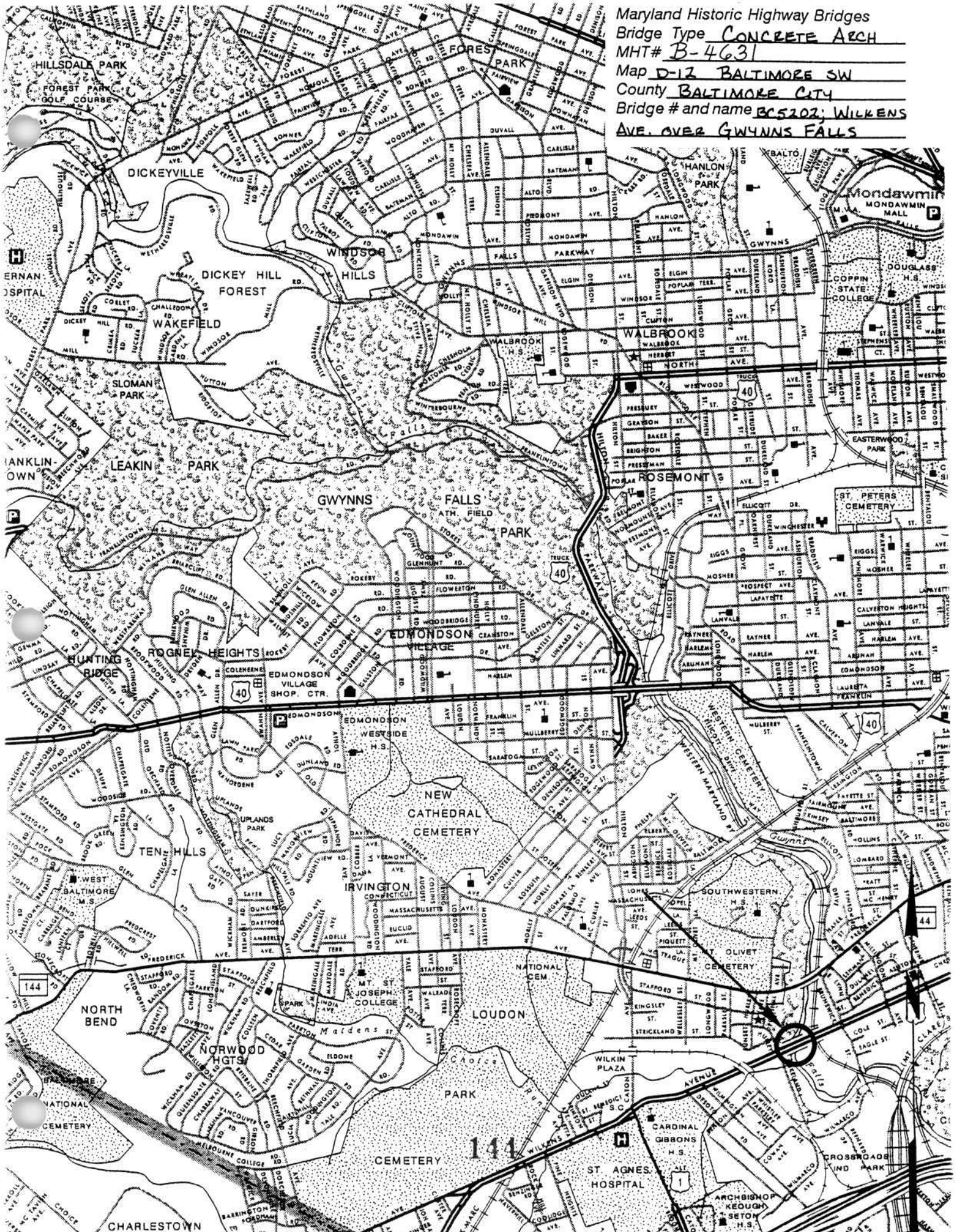
Johnson, Arthur Newhall
1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland.* Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

P.A.C. Spero & Company and Louis Berger & Associates
1995 Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report. Maryland State Highway Administration, Maryland State Department of Transportation, Baltimore, Maryland.

Tyrrell, H. Grattan
1909 *Concrete Bridges and Culverts for Both Railroads and Highways*. The Myron C. Clark Publishing Company, Chicago and New York.

SURVEYOR:

Date bridge recorded December 1997 / revised August 1998
Name of surveyor Caroline Hall
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204
Phone number (410) 296-1635 **FAX number** (410) 296-1670


Maryland Historic Highway Bridges
Bridge Type CONCRETE ARCH
MHT# B-4631
Map D-12 BALTIMORE SW
County BALTIMORE CITY
Bridge # and name BC5202; WILKENS AVE. OVER GWYNNS FALLS
HILLSDALE PARK
FOREST PARK GOLF COURSE
FOREST PARK
DICKEYVILLE
WINDSOR HILLS
DICKEY HILL FOREST
WAKEFIELD
SLOMAN PARK
LEAKIN PARK
GWYNNS FALLS ATH. FIELD PARK
HANLON PARK
Mondawmin
MONDAWMIN MALL
COPPIN STATE COLLEGE
DOUGLASS H.S.
WALBROOK
WALBROOK H.S.
EASTERWOOD PARK
ROSEMONT
ST. PETERS CEMETERY
EDMONDSON VILLAGE SHOP. CTR.
EDMONDSON VILLAGE
ROGNEL HEIGHTS
HUNTING RIDGE
EDMONDSON WESTSIDE H.S.
NEW CATHEDRAL CEMETERY
UPLANDS PARK
TEN HILLS
WEST BALTIMORE M.S.
IRVINGTON
SOUTHWESTERN H.S.
MT. OLIVET CEMETERY
NATIONAL CEM.
MT. ST. JOSEPH COLLEGE
LOUDON
NORTH BEND
NORWOOD HGTS.
PARK
WILKIN PLAZA
CARDINAL GIBBONS H.S.
ST. AGNES HOSPITAL
CROSSROADS IND. PARK
ARCHBISHOP KEOUGH SETON H.S.
CHARLESTOWN
CEMETERY
144
40
1

Inventory # B-4631

Name 5202 - WILKENS AVE AT GWYNNS FALLS
County/State BALTIMURE CITY/MD
Name of Photographer TIM SCHEEN
Date 1/95

Location of Negative SHA

Description EAST APPROACH

Number 1 ~~2~~ of ~~3~~ 4


NO STOPPING ANY TIME
NO STOPPING

Inventory # B-4631

Name 5202- WILKENS AVE AT GWYNNS FALLS
County/State BALTIMORE CITY /MD
Name of Photographer TIM SCHOEN
Date 1/95

Location of Negative SHA

Description WEST APPROACH

Number 2 29 of 37 4

Inventory # B-4631

Name 5202 - WILKENS AVE AT GWYNNS FALLS
County/State BALTIMORE CITY/MD
Name of Photographer TIM SCHOEN
Date 1/95

Location of Negative SHA

Description SOUTH ELEVATION

Number 3 ~~28~~ of ~~37~~ 4

Inventory # B-4631

Name 5202 - WILKENS AVE AT GWYNNS FALLS
County/State BALTIMORE CITY/MD
Name of Photographer TIM SCHOEN
Date 1/95

Location of Negative SHA

Description NORTH ELEVATION

Number 4 ~~2~~ of 37 4